CONTENTS

VOL. 12, NO. 1, MARCH, 1960

MACKLIN, MADGE T. A Study of Retinoblastoma in Ohio 1

STEINBERG, ARTHUR G., GILES, BRENDA DAWN, AND STAUFFER, RACHEL. A Gm-like Factor Present in Negroes and Rare or Absent in Whites: Its Relation to Gm^a and Gm^x 44

CHUNG, C. S., MORTON, N. E., AND PETERS, H. A. Serum Enzymes and Genetic Carriers in Muscular Dystrophy 52

ISHIKUNI, N., NEMOTO, H., NEEL, J. V., DREW, A. L., YANASE, T., AND MATSUMOTO, Y. S. Hosojima 67

MILCH, ROBERT AUSTIN. Studies of Alcaptonuria: Inheritance of 47 Cases in Eight Highly Inter-related Dominican Kindreds 76

GRAY, MARGERY P., AND LAUGHLIN, W. S. Blood Groups of Caddoan Indians of Oklahoma 86

Symposium on Cytology and Cell Culture Genetics of Man

Edited by GORDON ALLEN

CHU, E. H. Y. The Chromosome Complements of Human Somatic Cells 97

FORD, C. E. Human Cytogenetics: Its Present Place and Future Possibilities 104

BARR, M. L. Sexual Dimorphism in Interphase Nuclei 118

SACHS, L., AND KRIM, M. Some Systems for the Genetic Analysis of Mammalian Cells .. 128

FRACCARO, M. Cell Cultures for Human Genetic Studies and Concluding Remarks 134

Book Reviews 139

Letters to the Editor

STERN, CURT. O. Vogt and the Terms "Penetrance" and "Expressivity" 141

WAARDENBURG, P. J. Ectopia Lentis et Pupillae 141

VOL. 12, NO. 2, JUNE, 1960

ROSENFIELD, RICHARD E., HABER, GLADYS V., SCHROEDER, RUTH, AND BALLARD, RACHEL. A Negro Family Revealing Hunter-Henshaw Information, and Independence of the Genes for Js and Lewis 143

ROSENFIELD, RICHARD E., HABER, GLADYS V., SCHROEDER, RUTH, AND BALLARD, RACHEL. Problems in Rh Typing as Revealed by a Single Negro Family 147

GIBLETT, ELOISE R., AND STEINBERG, ARTHUR G. The Inheritance of Serum Haptoglobin Types in American Negroes: Evidence for a Third Allele Hp^{2m} 160

JARVIK, LISSY F., FALEK, ARTHUR, KALLMANN, FRANZ J., AND LORGE, IRVING. Survival Trends in a Senescent Twin Population 170

COHEN, BERNICE H. ABO-Rh Interaction in an Rh-Incompatibly Mated Population .. 180

ALLEN, GORDON. A Differential Method for Estimation of Type Frequencies in Triplets and Quadruplets 210

Book Reviews and Books Received 225

VOL. 12, NO. 3, SEPTEMBER, 1960

SANDBERG, AVERY A., KOEPF, GEORGE F., GROSSWHITE, LOIS H., AND HAUSCHKA, THEODORE S. The Chromosome Constitution of Human Marrow in Various Developmental and Blood Disorders 231

PATAU, KLAUS. The Identification of Individual Chromosomes, Especially in Man ... 250

HSIA, DAVID YI-YUNG, AND STEINBERG, ARTHUR G. Studies on Linkage Between Phenylketonuria and the Blood Groups 277

RENWICK, J. H., LAWLER, SYLVIA D., AND COWIE, VALERIE A. Phenylketonuria: A Genetical Linkage Study Using Phenylalanine Tolerance Tests 287
PEDEN, VIRGINIA H. True Idiopathic Hypoparathyroidism as a Sex-Linked Recessive Trait 323
SUTTON, H. ELDON, MATSON, G. ALBIN, ROBINSON, A. R., AND KOUCKY, R. W. Distribution of Haptoglobin, Transferrin, and Hemoglobin Types Among Indians of Southern Mexico and Guatemala 338
MORTON, NEWTON E. The Mutational Load Due to Detrimental Genes in Man 348
WRIGHT, SEWALL. "Genetics and Twentieth Century Darwinism"—A Review and Discussion 365
Book Reviews 373
Letters to the Editor
PERKOFF, GERALD T., STEPHENS, FAYETTE E., AND TYLER, FRANK H. Chronic Hereditary Nephritis and Y-Chromosome Linkage: Reply to Graham 381
GRAHAM, JOHN B. Chronic Hereditary Nephritis: Not Shown to be Partially Sex-Linked 382
REPORT OF A STUDY GROUP. A Proposed Standard System on Nomenclature of Human Mitotic Chromosomes 384

VOL. 12, NO. 4, DECEMBER, 1960

PART 1 (OF 2 PARTS)

SHAW, MARGERY W., FALLS, HAROLD F., AND NEEL, JAMES V. Congenital Aniridia ... 389
STEINBERG, ARTHUR G., AND BROWN, DONALD C. On the Incidence of Cystic Fibrosis of the Pancreas 416
GITTELSOHN, A. M. Family Limitation Based on Family Composition 425
JACKSON, CHARLES E., FALLS, HAROLD F., BLOCK, WALTER D., RUKAVINA, JOHN K., AND CAREY, JOSHUA H. Inheritance of Primary Systemic Amyloidosis 434
LYNCH, HENRY T., OZER, FARUK, MCNUTT, C. WALLACE, JOHNSON, JOHN E., AND JAMPOLSKY, NOEL A. Secondary Male Hypogonadism and Congenital Ichthyosis: Association of Two Rare Genetic Diseases 440
Book Reviews and Books Received 448
Index to Volume 12 453

VOL. 12, NO. 4, DECEMBER, 1960

PART 2 (OF 2 PARTS)

POST, RICHARD H. Subject Index for Bibliography of Human Genetics, Volumes 1-8 .. 1

INDEX

ABO
  ABO-Rh interaction, 180
adolase assay, 53
ahaptoglobinemia, 160
alcaptonuria
  in Dominican kindreds, 76
ALLEN, G., 95, 210
α_2 globulin
  in amyloidosis, 438
amyloidosis
  glycoproteins in, 438
  lipoproteins in, 438
  primary systemic, 434
  secondary, 434
    α_2 globulin in, 434
  serum hexosamine in, 438
anemia
  chromosomes in, 244
aniridia
  congenital, 389
    clinical description, 389
    frequency, 389
    familial cases, 389
    isolated cases, 389
    mutation rate, 389
    relative fitness, 389
antigenic variation, 128
ascertainment of retinoblastoma, 2
BALLARD, R., 143, 147
BARR, M. L., 118
BLOCK, W. D., 434
blood groups
  Caddoan Indians, 86
  linkage with phenylketonuria, 277, 287
books reviewed
  A Clinical and Genetico-Statistical Study of Schizophrenia and Low-Grade Mental Deficiency in a Large Swedish Rural Population, 226
  An Introduction to Medical Genetics, 228
  Essential Tremor: A Clinical and Genetic Population Study, 379
  Genetic Basis of Morphological Variation, 225
  Genetik des Menschen: Lehrbuch der Humangenetik, 139
  Hemophilia and Other Hemorrhagic States, 377
  Heredity and Human Nature, 450
  Human Heredity, 449
  Inheritance of Glioma: The Genetic Aspects of Cerebral Glioma and its Relation to Status Dysraphicus, 448
  Maladies Hereditaires du Metabolisme chez l'Enfant, 139
  Outline of Human Genetics, 378
  Radiation, Genes, and Man, 374
  Retinitis Pigmentosa Combined with Congenital Deafness; with Vestibulo-Cerebellar Ataxia and Mental Abnormality in a Proportion of Cases, 225
  Science and Liberal Education, 373
  Synthesis and Organization in the Bacterial Cell, 229
BROWN, D. C., 416
Caddoan Indians
  blood groups, 86
CAREY, J. H., 434
cell culture, 95
cell cultures
  for human genetic studies, 134
cell-virus associations, 131
chromocenter
  female-specific, 119
  derivation, 119
chromosomal variation, 128
chromosome complements
    human somatic cells, 97
chromosomes
  and congenital abnormalities, 110
  leukaemia, 113
CHU, E. H. Y., 97
CHUNG, C. S., 52
COHEN, BERNICE H., 180
congenital abnormalities
  chromosomes in, 110
consanguinity of parents
  retinoblastoma, 7
COWIE, VALERIE A., 287
CROSSWHITE, LOIS H., 231
cystic fibrosis of the pancreas
  incidence of, 416
cytology, 95
Darwinism
  genetics and, 365
detrimental equivalents, 348
DREW, A. L., 67

dyschromatosis symmetrica, 73
empiric risk
  retinoblastoma, 7
expressivity
  O. Vogt and, 141
FALEK, A., 170
FALLS, H. F., 389, 434
family limitation
  based on family composition, 425
  based on family size, 425
family size
  and family limitation, 425
FORD, C. E., 104
FRACCARO, M., 134
frequency of aniridia, 393
GIBLETT, ELOISE R., 160
GILES, BRENDA DAWN, 44
GITTELSOHN, A. M., 425
glutamic-oxalacetic transaminase in serum, 53
glycoproteins
  in amyloidosis, 438
Gm
  specificity of reagents, 49
Gm^a, 44
Gm^x, 44
Gm-like
  relation to
    Gm^a, 48
    Gm^x, 48
gonadal dysgenesis (Turner's syndrome), 123
GRAY, MARGERY P., 86
HABER, GLADYS V., 143, 147
haptoglobins
  ahaptoglobinemia, 160
  inheritance in Negroes, 160
  in Indians
    Mexico, 338
    Guatemala, 338
  third allele Hp^{2m}, 160
HAUSCHKA, T. S., 231
hemoglobins
  in Indians
    Mexico, 338
    Guatemala, 338
hereditary nephritis
  and sex-linkage, 382
  and Y-chromosome linkage, 381
hermaphroditism, true, 123
Hosojima, 67
  genetically determined disease in, 72
  history of, 70
HSIA, D. Y.-Y., 277
human chromosome morphology, 105
human chromosomes
  and blood disorders, 231
  identification of, 251
  in anemia, 244
  in leukemia, 244
  Klinefelter's syndromes, 233
  Lowe's syndrome, 233
  measurement of, 251
  mongolism, 233
  precocious puberty, 233
  proposed nomenclature, 384
  pseudohypoparathyroidism, 233
  technical advances in the study of, 99
  Turner's syndrome, 233
human cytogenetics, 104
human somatic cells
  chromosome complements, 97
Hunter-Henshaw
  independence of Js and Lewis, 143
  relation between, 143
hypoparathyroidism
  true idiopathic, 323
  sex-linked, 323
ichthyosis, congenital
  with male hypogonadism, 440
inbreeding, the coefficient of, 67
Indians
  haptoglobins in, 338
  hemoglobins in, 338
  transferrins in, 338
interphase nuclei
  sexual dimorphism, 118
ISHIKUNI, N., 67
JACKSON, C. E., 434
JAMPOLSKY, N. A., 440
JARVIK, LISSY F., 170
JOHNSON, J. E., 440
Js
  independence of Hunter-Henshaw, 143
KALLMANN, F. J., 170
karyotype
  of man, 100
Klinefelter's syndrome
  chromosomes in, 233
KOEPF, G. F., 231
KOUCKY, R. W., 338
KRIM, MATHILDE, 128
LAUGHLIN, W. S., 86
LAWLER, SYLVIA D., 287
letters to the editor
  A proposed standard system of nomenclature of human mitotic chromosomes, 384

Chronic hereditary nephritis: not shown to be partially sex-linked, 382
Chronic hereditary nephritis and Y-chromosome linkage: reply to Graham, 381
Ectopia lentis et pupillae, 141
O. Vogt and the terms "penetrance" and "expressivity", 141
leukemia
chromosomes in, 113, 244
Lewis
independence of Hunter-Henshaw, 143
life span
in twins, 170
linkage studies
blood groups and phenylketonuria, 277, 287
lipoproteins
in amyloidosis, 438
LORGE, I., 170
Lowe's syndrome
chromosomes in, 233
LYNCH, H. T., 440
McNUTT, C. W., 440
MACKLIN, M. T., 1
male hypogonadism
secondary
with ichthyosis, 440
chromosomes, 441
mammalian cells
antigenic variation in, 128
cell-virus associations in, 131
chromosomal variation in, 128
genetic analysis, 128
MATSON, G. A., 338
MATSUMOTO, Y. S., 67
MILCH, R. A., 76
mongolism
chromosomes in, 233
MORTON, N. E., 52, 348
multiple births
frequency of zygosity types of
triplets in, 210
quadruplets, 210
muscular dystrophy
genetic carriers, 52
in chickens, 54
in man, 58
serum enzymes, 52
mutation rate
congenital aniridia, 389
retinoblastoma, 39
mutational load
due to detrimental genes, 348
NEEL, J. V., 67, 389
Negroes
Rh typing in, 147
serum haptoglobin types in, 160
NEMOTO, H., 67
nerve deafness with muteness, 72
nomenclature
human chromosomes, 384
non-disjunction
of sex chromosomes, 107
OZER, F., 440
parental age
retinoblastoma, 6
PATAU, K., 250
PEDEN, VIRGINIA H., 323
penetrance
retinoblastoma, 37
O. Vogt and, 141
periodic disease, 435
PETERS, H. A., 52
phenylketonuria
linkage studies, 277, 287
population
Rh incompatible, 180
ABO-Rh interaction, 180
population genetics, 370
populations
twin, 170
precocious puberty
chromosomes in, 233
pseudohermaphroditism
female, 122
male, 123
pseudohypoparathyrodism
chromosomes in, 233
quadruplets
frequency of zygosity types, 210
relative fitness
congenital aniridia, 389
RENWICK, J. H., 287
retinoblastoma
ascertainment, 2
consanguinity of parents, 7
empiric risk, 7
frequency in Ohio, 7
hereditary, 4
laterality, 5
mutation rate, 39
parental age, 6
pedigrees, description of, 10
penetrance, 37
sporadic, 4
survival of, 5
Rh
ABO-Rh interaction, 180

Rh alleles
  $\bar{R}^0$, 153
  R^N, 153
  r'^n, 153
Rh typing
  in Negroes, 147
rheumatoid arthritis, 44
Robinson, A. R., 338
Rosenfield, R. E., 143, 147
Rukavina, J. K., 434
Sachs, L., 128
Sandberg, A. A., 231
Schroeder, Ruth, 143, 147
sex anomalies
  nuclear sexual dimorphism in human, 121
sex chromatin, 118
sex-chromosomes
  abnormalities of, 105, 107
sex determination
  the mechanism of, 109
sex-linkage
  and hereditary nephritis, 382
sex-linked trait
  hypoparathyroidism, 323
Shaw, Margery, W., 389
Stauffer, Rachel, 44
Steinberg, A. G., 44, 160, 277, 416
Stern, C., 141
survival
  in twins, 170
Sutton, H. E., 338
symposium
  cytology and cell culture, 95
testicular feminization, 123
transferrins
  in Indians
    Mexico, 338
    Guatemala, 338
triplets
  frequency of zygosity types, 210
Turner's syndrome
  chromosomes in, 233
twins
  survival in, 170
Waardenburg, P. J., 142
Wright, S., 365
Yanase, T., 67
Y-chromosome linkage
  and hereditary nephritis, 381